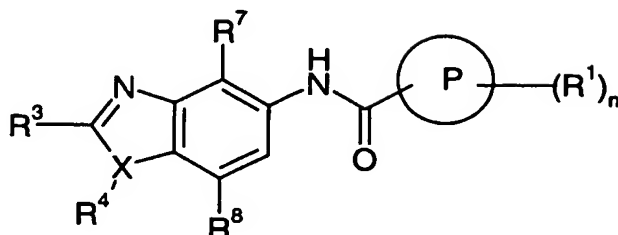


CLAIMS

1. A compound having the formula I



wherein:

- 5 ring P is C₆₋₁₀aryl, C₃₋₇cycloalkyl, C₅₋₆heteroaryl, which ring P may be fused with phenyl, C₅₋₆heteroaryl, C₃₋₇cycloalkyl or C₃₋₇heterocycloalkyl;
 R¹ is NO₂, NH₂, halo, N(C₁₋₆alkyl)₂, C₁₋₆alkyl, C₂₋₆alkenyl, C₂₋₆alkynyl, C₁₋₆haloalkyl, C₁₋₆haloalkylO, phenylC₀₋₆alkyl, C₅₋₆heteroarylC₀₋₆alkyl, C₃₋₇cycloalkylC₀₋₆alkyl, C₃₋₇heterocycloalkylC₀₋₆alkyl, C₁₋₆alkylOC₀₋₆alkyl, C₁₋₆alkylSC₀₋₆alkyl or
 10 C₁₋₆alkylNC₀₋₆alkyl;
 n is 1, 2, 3, 4 or 5;
 X is O or S, when
 R³ is H, C₁₋₆alkyl, C₁₋₆haloalkyl, R⁵OC₁₋₆alkyl, R⁵OCO, R⁵CO, NR⁵R⁶CO, NR⁵R⁶C₀₋₆alkyl, C₂₋₆alkenylOC₀₋₆alkyl or hydroxyC₁₋₆alkyl; and
 15 R⁴ is nil; or
 X is N, when
 R³ is H, C₁₋₆alkyl, C₁₋₆iodoalkyl, C₁₋₆bromoalkyl, C₁₋₆chloroalkyl, C₁₋₆alkylOC₀₋₆alkyl, R⁵OC₁₋₆alkyl, R⁵CO, R⁵CO₂, NR⁵R⁶CO, NR⁵R⁶C₀₋₆alkyl or C₂₋₆alkenylOC₀₋₆alkyl; and
 R⁴ is H, C₁₋₄alkyl, hydroxyC₁₋₆alkyl or C₁₋₆alkylOC₁₋₆alkyl; or
 20 X is N, when R³ is C₁₋₆fluoroalkyl or hydroxyC₁₋₂alkyl and R⁴ is H;
 R⁵ and R⁶ are independently selected from H, C₁₋₆alkyl, C₆₋₁₀aryl, C₅₋₆heteroaryl, C₁₋₄alkylSO₂ and C₁₋₃alkylCO;
 R⁷ and R⁸ are independently selected from H, C₁₋₆alkyl, halo, cyano, C₁₋₆alkylOC₀₋₆alkyl, OH, NO₂ and COR⁹, N(R⁹)₂;
 25 R⁹ is H or C₁₋₆alkyl;
 and wherein any alkyl, alkylOalkyl, haloalkyl, haloalkylO, phenyl, heteroaryl, cycloalkyl or heterocycloalkyl group may be substituted with one or more A; and

A is OH, NO₂, R⁹CO, R⁹O(CO), N(R⁹)₂, R⁹S, R⁹SO₂, halo or C₁₋₆alkylOC₀₋₆alkyl, or salts, solvates or solvated salts thereof.

2. The compound according to claim 1 wherein

5 ring P is C₆₋₁₀aryl, C₅₋₆heteroaryl, which ring P may be fused with C₃₋₇heterocycloalkyl;

R¹ is NO₂, NH₂, halo, N(C₁₋₆alkyl)₂, C₁₋₆alkyl, C₂₋₆alkenyl, C₁₋₆haloalkyl, C₁₋₆haloalkylO, phenylC₀₋₆alkyl, C₃₋₇heterocycloalkylC₀₋₆alkyl, C₁₋₆alkylOC₀₋₆alkyl or C₁₋₆alkylSC₀₋₆alkyl;

10 n is 1, 2 or 3;

X is O or S, when

R³ is C₁₋₆alkyl, NR⁵R⁶CO, NR⁵R⁶C₀₋₆alkyl, C₂₋₆alkenylOC₀₋₆alkyl or hydroxyC₁₋₆alkyl; and

R⁴ is nil; or

X is N, when

15 R³ is H or C₁₋₆alkyl; and

R⁴ is C₁₋₄alkyl or hydroxyC₁₋₆alkyl; or

X is N, when R³ is C₁₋₆fluoroalkyl and R⁴ is H;

R⁵ and R⁶ are independently selected from H, C₆₋₁₀aryl, C₅₋₆heteroaryl, C₁₋₄alkylSO₂ and C₁₋₃ alkylCO;

20 R⁷ and R⁸ are independently selected from H, halo and cyano;

and wherein any alkyl, phenyl, heteroaryl group may be substituted with one or more A; and

A is OH, NO₂, halo or C₁₋₆alkylOC₀₋₆alkyl.

25 3. The compound according to any one of claims 1 or 2 wherein X is S and R³ is methyl.

4. The compound according to any one of claims 1 or 2 wherein X is O and R³ is C₁₋₆alkyl or hydroxyC₁₋₆alkyl.

30 5. The compound according to any one of claims 1 or 2 wherein X is N and R³ is C₁₋₆alkyl and R⁴ is C₁₋₆alkyl or hydroxyC₁₋₆alkyl.

6. The compound according to any one of claims 1 to 5 wherein
 ring P is phenyl and R¹ is NO₂, NH₂, halo, N(C₁₋₆alkyl)₂, C₁₋₆alkyl, C₂₋₆alkenyl,
 C₂₋₆alkynyl, C₁₋₆haloalkyl, C₁₋₆haloalkylO, phenylC₀₋₆alkyl, C₅₋₆heteroarylC₀₋₆alkyl,
 C₃₋₇cycloalkylC₀₋₆alkyl, C₃₋₇heterocycloalkylC₀₋₆alkyl, C₁₋₆alkylOC₀₋₆alkyl,
 5 C₁₋₆alkylSC₀₋₆alkyl or C₁₋₆alkylNC₀₋₆alkyl optionally substituted with one or more A.
7. The compound according to any one of claims 1 to 5 wherein
 ring P is pyrazolyl, pyridine, benzodioxolane, furan, thiophene or naphthalene.
- 10 8. Compounds selected from the group consisting of
 3-Fluoro-*N*-(2-methyl-1,3-benzothiazol-5-yl)-4-trifluoromethyl-benzamide,
 2-tert-Butyl-5-methyl-2*H*-pyrazole-3-carboxylic acid (2-methyl-1,3-benzothiazol-5-yl)-
 amide,
 2-Fluoro-*N*-(2-methyl-1,3-benzothiazol-5-yl)-4-trifluoromethyl-benzamide,
 15 2-Fluoro-*N*-(2-methyl-1,3-benzothiazol-5-yl)-3-trifluoromethyl-benzamide,
 4-Fluoro-*N*-(2-methyl-1,3-benzothiazol-5-yl)-3-trifluoromethyl-benzamide,
 3,4-Dimethyl-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
 2,2-Difluoro-benzo[1,3]dioxole-5-carboxylic acid (2-methyl-1,3-benzothiazol-5-yl)-amide,
N-(2-Methyl-1,3-benzothiazol-5-yl)-6-trifluoromethyl-nicotinamide,
 20 *N*-(2-Methyl-1,3-benzothiazol-5-yl)-4-propyl-benzamide,
 3-Iodo-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
 2,5-Dimethyl-furan-3-carboxylic acid (2-methyl-1,3-benzothiazol-5-yl)-amide,
 5-tert-Butyl-2-methyl-furan-3-carboxylic acid (2-methyl-1,3-benzothiazol-5-yl)-amide,
 4-Bromo-3-methyl-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
 25 3,4-Difluoro-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
 3-Chloro-2-fluoro-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
 Pyridine-2-carboxylic acid (2-methyl-1,3-benzothiazol-5-yl)-amide,
 2-Benzyl-5-tert-butyl-2*H*-pyrazole-3-carboxylic acid (2-methyl-1,3-benzothiazol-5-yl)-
 amide,
 30 3-Fluoro-4-trifluoromethyl-*N*-(2-trifluoromethyl-1*H*-benzimidazol-5-yl)-benzamide,
 2-Fluoro-5-trifluoromethyl-*N*-(2-trifluoromethyl-1*H*-benzimidazol-5-yl)-benzamide,
 4-Chloro-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,

- 1-Phenyl-5-trifluoromethyl-1*H*-pyrazole-3-carboxylic acid (2-methyl-1,3-benzothiazol-5-yl)-amide,
1-Phenyl-5-propyl-1*H*-pyrazole-4-carboxylic acid (2-methyl-1,3-benzothiazol-5-yl)-amide,
2,3-Difluoro-*N*-(2-methyl-1,3-benzothiazol-5-yl)-4-trifluoromethyl-benzamide,
5 3-Fluoro-4-methyl-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
4-*tert*-Butyl-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
4-Ethyl-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
4-*tert*-Butyl-*N*-(2-methyl-benzooxazol-5-yl)-benzamide,
Biphenyl-4-carboxylic acid (2-methyl-1,3-benzothiazol-5-yl)-amide,
10 3-Bromo-thiophene-2-carboxylic acid (2-methyl-1,3-benzothiazol-5-yl)-amide,
4-Bromo-2-methyl-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
4-*tert*-Butoxy-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
2-Chloro-3,4-dimethoxy-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
4-Iodo-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
15 4-Amino-*N*-(2-methyl-1,3-benzothiazol-5-yl)-3-nitro-benzamide,
N-(2-Methyl-1,3-benzothiazol-5-yl)-4-vinyl-benzamide,
4-Ethoxy-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
4-Ethylsulfanyl-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
4-Dimethylamino-naphthalene-1-carboxylic acid (2-methyl-1,3-benzothiazol-5-yl)-amide,
20 2-Fluoro-6-iodo-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
4-Ethoxymethyl-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
N-(2-Methyl-1,3-benzothiazol-5-yl)-4-trifluoromethoxy-benzamide, and
4-Chloro-3-fluoro-*N*-(2-methyl-1,3-benzothiazol-5-yl)-benzamide,
4-*tert*-Butyl-*N*-(2-formyl-1,3-benzothiazol-5-yl)-benzamide,
25 4-*tert*-Butyl-*N*-(2-hydroxymethyl-1,3-benzothiazol-5-yl)-benzamide,
5-(4-*tert*-butylbenzoylamino)-1,3-benzothiazol-2-ylcarboxylic acid, and
4-*tert*-Butyl-*N*-(2-methoxycarbonyl-1,3-benzothiazol-5-yl)-benzamide,
4-*tert*-Butoxy-*N*-[2-(hydroxymethyl)-1,3-benzothiazol-5-yl]benzamide,
4-Bromo-*N*-[2-(hydroxymethyl)-1,3-benzothiazol-5-yl]benzamide,
30 *N*-[2-(Hydroxymethyl)-1,3-benzothiazol-5-yl]-4-iodobenzamide,
N-[2-(Hydroxymethyl)-1,3-benzothiazol-5-yl]-4-morpholin-4-ylbenzamide,
N-{2-[(Allyloxy)methyl]-1,3-benzothiazol-5-yl}-4-morpholin-4-ylbenzamide,

N-[2-(Hydroxymethyl)-1,3-benzothiazol-5-yl]-1-phenyl-5-propyl-1H-pyrazole-4-carboxamide,

1-tert-Butyl-N-[2-(hydroxymethyl)-1,3-benzothiazol-5-yl]-3-methyl-1H-pyrazole-5-carboxamide,

5 4-(Ethoxymethyl)-N-[2-(hydroxymethyl)-1,3-benzothiazol-5-yl]benzamide,

N-[2-(Hydroxymethyl)-1,3-benzothiazol-5-yl]-1-phenyl-1H-pyrazole-5-carboxamide,

4-Bromo-N-[2-(hydroxymethyl)-1,3-benzothiazol-5-yl]-2-methylbenzamide,

4-tert-Butoxy-N-(2-methyl-1,3-benzoxazol-5-yl) benzamide,

N-(4-Bromo-2-methyl-1,3-benzothiazol-5-yl)-4-tert-butylbenzamide,

10 4-tert-Butyl-N-(4,7-dibromo-2-methyl-1,3-benzothiazol-5-yl)benzamide,

N-[2-(hydroxymethyl)-1,3-benzothiazol-5-yl]-1-phenyl-5-(trifluoromethyl)-1H-pyrazole-4-carboxamide,

4-Iodo-N-(2-methyl-5-benzothiazolyl)benzamide,

4-(tert-Butoxymethyl)-N-[2-(hydroxymethyl)-1,3-benzothiazol-5-yl]benzamide,

15 N-(1,2-Dimethyl-1H-benzimidazol-5-yl)-4-iodobenzamide,

4-tert-Butyl-N-(2-([(2-methoxypyridin-3-yl)amino]methyl)-1,3-benzothiazol-5-yl)benzamide,

4-tert-Butyl-N-[2-(1-hydroxyethyl)-1,3-benzothiazol-5-yl]benzamide,

4-tert-Butyl-N-{2-[(1H-pyrazol-3-ylamino)methyl]-1,3-benzothiazol-5-yl} benzamide,

20 4-(1,1-Dimethylethyl)-N-[2-([(4-nitrophenyl)amino]methyl)-5-benzothiazolyl]-benzamide,

N-[2-(Aminomethyl)-1,3-benzothiazol-5-yl]-4-tert-butylbenzamide,

4-tert-Butyl-N-(2-([(methylsulfonyl)amino]methyl)-1,3-benzothiazol-5-yl)benzamide,

N-{2-[(Acetylamino)methyl]-1,3-benzothiazol-5-yl}-4-tert-butylbenzamide,

5-[(4-tert-Butylbenzoyl)amino]-1,3-benzothiazole-2-carboxamide,

25 N-1,3-Benzothiazol-5-yl-4-tert-butylbenzamide,

4-Chloro-N-[2-(hydroxymethyl)-1,3-benzothiazol-5-yl]benzamide,

1-(4-chlorophenyl)-N-[2-(hydroxymethyl)-1,3-benzothiazol-5-yl]-5-propyl-1H-pyrazole-4-carboxamide,

1-(4-chlorophenyl)-N-[2-(hydroxymethyl)-1,3-benzothiazol-5-yl]-5-(trifluoromethyl)-1H-pyrazole-4-carboxamide,

30 N-(2,4-dimethyl-1,3-benzothiazol-5-yl)-4-(1-hydroxy-1-methylethyl)benzamide,

4-(Hydroxymethyl)-N-[2-(hydroxymethyl)-1,3-benzothiazol-5-yl]benzamide and

4-*tert*-butyl-*N*-(4-cyano-2-methyl-1,3-benzothiazol-5-yl)benzamide,
N-[2-(Hydroxymethyl)-1,3-benzothiazol-5-yl]-4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]benzamide,
N-[2-(Hydroxymethyl)-1,3-benzothiazol-5-yl]-4-isopropoxybenzamide,
5 4-Bromo-2-chloro-*N*-[2-(hydroxymethyl)-1,3-benzothiazol-5-yl]benzamide,
4-Bromo-2-fluoro-*N*-[2-(hydroxymethyl)-1,3-benzothiazol-5-yl]benzamide,
N-[2-(Hydroxymethyl)-1,3-benzothiazol-5-yl]-4-(morpholin-4-ylmethyl)benzamide,
3-Fluoro-*N*-[2-(hydroxymethyl)-1,3-benzothiazol-5-yl]-4-(trifluoromethyl)benzamide,
4-*tert*-butoxy-*N*-[4-chloro-2-(hydroxymethyl)-1,3-benzothiazol-5-yl]benzamide,
10 4-(*tert*-Butoxymethyl)-*N*-[4-chloro-2-(hydroxymethyl)-1,3-benzothiazol-5-yl]benzamide,
and
4-*tert*-butyl-*N*-[2-(hydroxymethyl)-1,3-benzoxazol-5-yl]benzamide,
or salts, solvates or solvated salts thereof.

15 9. A pharmaceutical composition comprising as active ingredient a therapeutically effective amount of the compound according to any one of claims 1 to 8, in association with one or more pharmaceutically acceptable diluents, excipients and/or inert carriers.

20 10. The pharmaceutical composition according to claim 9, for use in the treatment of VR1 mediated disorders and for treatment of acute and chronic pain disorders, acute and chronic neuropathic pain and acute and chronic inflammatory pain.

11. The compound according to any one of claims 1 to 8, for use in therapy.

25 12. Use of the compounds of formula I according to any one of claims 1 to 8, in the manufacture of a medicament for treatment of VR1 mediated disorders.

13. The use according to claim 12 for treatment of acute and chronic pain disorders.

30 14. The use according to claim 12 for treatment of acute and chronic neuropathic pain.

15. The use according to claim 12 for treatment of acute and chronic inflammatory pain.

16. The use according to claim 12 for treatment of arthritis, fibromyalgia, low back pain, post-operative pain, visceral pains like chronic pelvic pain, cystitis, irritable bowel syndrome (IBS), pancreatitis, ischemic, sciatica, diabetic neuropathy, multiple sclerosis, interstitial cystitis and pain related to interstitial cystitis, HIV neuropathy, asthma, cough and inflammatory bowel disease (IBD), gastro-esophageal reflux disease (GERD), psoriasis, cancer, emesis, urinary incontinence and hyperactive bladder.

17. The use according to claim 12 for treatment of respiratory diseases.

18. A method of treatment of VR1 mediated disorders and for treatment of acute and chronic pain disorders, acute and chronic neuropathic pain and acute and chronic inflammatory pain, and respiratory diseases, comprising administering to a mammal, including man in need of such treatment, a therapeutically effective amount of the compounds of formula I, according to any one of claims 1 to 8.

19. Compounds selected from the group consisting of allyl (5-amino-1,3-benzothiazol-2-yl)methyl carbonate, 4-tert-Butyl-N-(2-formyl-1,3-benzothiazol-5-yl)-benzamide, and 4-Bromo-2-methyl-benzothiazol-5-ylamine, and 4-chloro-2-methyl-benzothiazole-5-ylamine.

20. Use of compounds according to claim 19 as intermediates in the preparation of the compound of formula I.